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# PERBAIKAN FERMENTASI NIRA TRADISIONAL DENGAN INOKULASI KHAMIR DAN TINDALISASI IMPROVEMENT OF TRADITIONAL PALM SAP FERMENTATION BY YEAST INOCULATION AND TYNDALISATION

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## ABSTRACT

*Lègèn or tuak has been known as one of the indigenous alcoholic beverages produced from palm sap (nira) in Indonesia, especially in Java. However, local technology employed by the manufacturers resulted in a very short shelf-life of the product and therefore, a less economic value. To increase the added value of lègèn innovative production technology requires basic information which deal with the improvement of the fermentation process. This study was done to proof that traditional fermentation of nira might be improved by inoculation with a particular strain of yeast. The experiment was carried out in the laboratory by allowing the inoculated yeast cells to ferment nira. Changes in the amounts of alcohol accumulated in the cultures and glucose consumed by the yeast cells were observed during fermentation. Such changes were then compared to those of traditionally fermented batches. The result shows that there is a pH decrease in natural fermentation. This is due to the activity of bacteria which produce organic acid. On the other hand, alcohol is a major product in inoculated fermentation, as a consequence of yeast activities which was inoculated in nira-medium. Data demonstrated that conversion of glucose into alcohol is more effective in inoculated fermentation than in natural fermentation. Tyndalisation and inoculation of selected yeast is proved to be a method for improving the quality of traditional product by suppressing acid formation.*

**Key words:** *lègèn, tindalysation, selected yeast, organic acid, alcohol formation*